```
* * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:39:06 ON 07 MAY 2008

=> fil .bec
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                    ENTRY        SESSION
FULL ESTIMATED COST                                  0.21         0.21

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 13:39:21 ON 07 MAY 2008
ALL COPYRIGHTS AND RESTRICTIONS APPLY.  SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s cysk or cysteine synthase#
FILE 'MEDLINE'
            82 CYSK
         73445 CYSTEINE
        107612 SYNTHASE#
           269 CYSTEINE SYNTHASE#
               (CYSTEINE(W)SYNTHASE#)
L1         309 CYSK OR CYSTEINE SYNTHASE#

FILE 'SCISEARCH'
            58 CYSK
         55567 CYSTEINE
        129731 SYNTHASE#
           242 CYSTEINE SYNTHASE#
               (CYSTEINE(W)SYNTHASE#)
L2         280 CYSK OR CYSTEINE SYNTHASE#

FILE 'LIFESCI'
            53 CYSK
         21199 "CYSTEINE"
         29544 SYNTHASE#
           109 CYSTEINE SYNTHASE#
               ("CYSTEINE"(W)SYNTHASE#)
L3         146 CYSK OR CYSTEINE SYNTHASE#

FILE 'BIOTECHDS'
            58 CYSK
          5098 CYSTEINE
          7240 SYNTHASE#
            70 CYSTEINE SYNTHASE#
               (CYSTEINE(W)SYNTHASE#)
L4          95 CYSK OR CYSTEINE SYNTHASE#

FILE 'BIOSIS'
            82 CYSK
         72786 CYSTEINE
        118475 SYNTHASE#
           275 CYSTEINE SYNTHASE#
               (CYSTEINE(W)SYNTHASE#)
L5         335 CYSK OR CYSTEINE SYNTHASE#

FILE 'EMBASE'
            65 CYSK
         57869 "CYSTEINE"
        108341 SYNTHASE#
           233 CYSTEINE SYNTHASE#
               ("CYSTEINE"(W)SYNTHASE#)
```

```
L6           266 CYSK OR CYSTEINE SYNTHASE#

FILE 'HCAPLUS'
             207 CYSK
          113054 CYSTEINE
          114637 SYNTHASE#
             426 CYSTEINE SYNTHASE#
                 (CYSTEINE(W)SYNTHASE#)
L7           537 CYSK OR CYSTEINE SYNTHASE#

FILE 'NTIS'
               0 CYSK
             521 CYSTEINE
             294 SYNTHASE#
               0 CYSTEINE SYNTHASE#
                 (CYSTEINE(W)SYNTHASE#)
L8             0 CYSK OR CYSTEINE SYNTHASE#

FILE 'ESBIOBASE'
              46 CYSK
           28558 CYSTEINE
           54244 SYNTHASE#
             124 CYSTEINE SYNTHASE#
                 (CYSTEINE(W)SYNTHASE#)
L9           154 CYSK OR CYSTEINE SYNTHASE#

FILE 'BIOTECHNO'
              43 CYSK
           22339 CYSTEINE
           29457 SYNTHASE#
             130 CYSTEINE SYNTHASE#
                 (CYSTEINE(W)SYNTHASE#)
L10          151 CYSK OR CYSTEINE SYNTHASE#

FILE 'WPIDS'
              52 CYSK
           11722 CYSTEINE
            6793 SYNTHASE#
              51 CYSTEINE SYNTHASE#
                 (CYSTEINE(W)SYNTHASE#)
L11           72 CYSK OR CYSTEINE SYNTHASE#

TOTAL FOR ALL FILES
L12         2345 CYSK OR CYSTEINE SYNTHASE#

=> s (serine or ser)(15a)(rich or high or level# or yield# or optimiz?)
FILE 'MEDLINE'
          104476 SERINE
           24227 SER
           97298 RICH
         1628405 HIGH
         1728866 LEVEL#
          148032 YIELD#
           86595 OPTIMIZ?
L13         6126 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
                 ?)

FILE 'SCISEARCH'
           60386 SERINE
           25468 SER
          182902 RICH
         2495375 HIGH
```

```
          1857333 LEVEL#
           469670 YIELD#
           296759 OPTIMIZ?
L14          5582 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
                 ?)


FILE 'LIFESCI'
            25076 SERINE
            12695 SER
            42324 RICH
           452482 HIGH
           519831 LEVEL#
            64869 YIELD#
            23816 OPTIMIZ?
L15          3464 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
                 ?)


FILE 'BIOTECHDS'
             5782 SERINE
             5928 SER
             5272 RICH
            85899 HIGH
            60173 LEVEL#
            43309 YIELD#
            21488 OPTIMIZ?
L16           708 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
                 ?)


FILE 'BIOSIS'
            82532 SERINE
            26259 SER
           134104 RICH
          1833264 HIGH
          1945774 LEVEL#
           380018 YIELD#
            85361 OPTIMIZ?
L17          7142 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
                 ?)


FILE 'EMBASE'
            67554 SERINE
            24058 SER
            86612 RICH
          1556063 HIGH
          1965291 LEVEL#
           157476 YIELD#
            82286 OPTIMIZ?
L18          5467 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
                 ?)


FILE 'HCAPLUS'
           119700 SERINE
            38596 SER
           315641 RICH
          4313341 HIGH
          2553316 LEVEL#
          1269022 YIELD#
           360435 OPTIMIZ?
L19         10355 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
                 ?)


FILE 'NTIS'
```

```
           578 SERINE
           438 SER
          9733 RICH
        340332 HIGH
        238143 LEVEL#
         56808 YIELD#
         62468 OPTIMIZ?
L20         81 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
               ?)

FILE 'ESBIOBASE'
         32396 SERINE
         14901 SER
         56532 RICH
        641710 HIGH
        717809 LEVEL#
         95471 YIELD#
         42201 OPTIMIZ?
L21       4374 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
               ?)

FILE 'BIOTECHNO'
         28989 SERINE
         11924 SER
         29372 RICH
        299126 HIGH
        367944 LEVEL#
         41645 YIELD#
         16086 OPTIMIZ?
L22       3241 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
               ?)

FILE 'WPIDS'
         11087 SERINE
         13584 SER
         41223 RICH
       2375938 HIGH
        706149 LEVEL#
        314587 YIELD#
         61673 OPTIMIZ?
L23        705 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
               ?)

TOTAL FOR ALL FILES
L24      47245 (SERINE OR SER)(15A)(RICH OR HIGH OR LEVEL# OR YIELD# OR OPTIMIZ
               ?)

=> s l12 and l24
FILE 'MEDLINE'
L25         13 L1 AND L13

FILE 'SCISEARCH'
L26          9 L2 AND L14

FILE 'LIFESCI'
L27          6 L3 AND L15

FILE 'BIOTECHDS'
L28          2 L4 AND L16

FILE 'BIOSIS'
L29          9 L5 AND L17
```

```
FILE 'EMBASE'
L30          6 L6 AND L18

FILE 'HCAPLUS'
L31         12 L7 AND L19

FILE 'NTIS'
L32          0 L8 AND L20

FILE 'ESBIOBASE'
L33          5 L9 AND L21

FILE 'BIOTECHNO'
L34          8 L10 AND L22

FILE 'WPIDS'
L35          1 L11 AND L23

TOTAL FOR ALL FILES
L36         71 L12 AND L24

=> s l12 and coexpress?
FILE 'MEDLINE'
        15797 COEXPRESS?
L37          2 L1 AND COEXPRESS?

FILE 'SCISEARCH'
        16293 COEXPRESS?
L38          2 L2 AND COEXPRESS?

FILE 'LIFESCI'
         7659 COEXPRESS?
L39          2 L3 AND COEXPRESS?

FILE 'BIOTECHDS'
          826 COEXPRESS?
L40          1 L4 AND COEXPRESS?

FILE 'BIOSIS'
        16063 COEXPRESS?
L41          2 L5 AND COEXPRESS?

FILE 'EMBASE'
        14913 COEXPRESS?
L42          1 L6 AND COEXPRESS?

FILE 'HCAPLUS'
        15129 COEXPRESS?
L43          2 L7 AND COEXPRESS?

FILE 'NTIS'
           39 COEXPRESS?
L44          0 L8 AND COEXPRESS?

FILE 'ESBIOBASE'
        11681 COEXPRESS?
L45          1 L9 AND COEXPRESS?

FILE 'BIOTECHNO'
         7587 COEXPRESS?
L46          1 L10 AND COEXPRESS?
```

```
FILE 'WPIDS'
          215 COEXPRESS?
L47           0 L11 AND COEXPRESS?

TOTAL FOR ALL FILES
L48          14 L12 AND COEXPRESS?

=> s (amino acid or ser or serine)(15a)(composition# or profil?)
FILE 'MEDLINE'
       679698 AMINO
      1545785 ACID
       512917 AMINO ACID
                 (AMINO(W)ACID)
        24227 SER
       104476 SERINE
       189419 COMPOSITION#
       295830 PROFIL?
L49       14609 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'SCISEARCH'
       436194 AMINO
      1284495 ACID
       229538 AMINO ACID
                 (AMINO(W)ACID)
        25468 SER
        60386 SERINE
       481688 COMPOSITION#
       450081 PROFIL?
L50       10441 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'LIFESCI'
       188499 "AMINO"
       346634 "ACID"
       128460 AMINO ACID
                 ("AMINO"(W)"ACID")
        12695 SER
        25076 SERINE
       112277 COMPOSITION#
        70621 PROFIL?
L51        6520 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'BIOTECHDS'
        77138 AMINO
       156885 ACID
        56317 AMINO ACID
                 (AMINO(W)ACID)
         5928 SER
         5782 SERINE
        48820 COMPOSITION#
        13472 PROFIL?
L52        3057 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'BIOSIS'
       607898 AMINO
      1529894 ACID
       351102 AMINO ACID
                 (AMINO(W)ACID)
        26259 SER
        82532 SERINE
       399670 COMPOSITION#
       283754 PROFIL?
```

```
L53      25509 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'EMBASE'
        477055 "AMINO"
       1561386 "ACID"
        322430 AMINO ACID
                 ("AMINO"(W)"ACID")
         24058 SER
         67554 SERINE
        169493 COMPOSITION#
        246818 PROFIL?
L54      13983 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'HCAPLUS'
       1167276 AMINO
       4574559 ACID
        588346 AMINO ACID
                 (AMINO(W)ACID)
         38596 SER
        119700 SERINE
       1045977 COMPOSITION#
       1531580 COMPN
       2132732 COMPOSITION#
                 (COMPOSITION# OR COMPN)
        510830 PROFIL?
L55      40071 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'NTIS'
          7322 AMINO
         45258 ACID
          2654 AMINO ACID
                 (AMINO(W)ACID)
           438 SER
           578 SERINE
         72162 COMPOSITION#
         59406 PROFIL?
L56        237 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'ESBIOBASE'
        205248 AMINO
        402935 ACID
        113740 AMINO ACID
                 (AMINO(W)ACID)
         14901 SER
         32396 SERINE
        104790 COMPOSITION#
        121152 PROFIL?
L57       4140 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'BIOTECHNO'
        204625 AMINO
        349810 ACID
        154660 AMINO ACID
                 (AMINO(W)ACID)
         11924 SER
         28989 SERINE
         38895 COMPOSITION#
         42958 PROFIL?
L58       6366 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

FILE 'WPIDS'
        299450 AMINO
```

```
       1143063 ACID
         87042 AMINO ACID
               (AMINO(W)ACID)
         13584 SER
         11087 SERINE
        845784 COMPOSITION#
          8849 COMPN
        398425 COMPSN
        114205 COMPSNS
       1029782 COMPOSITION#
               (COMPOSITION# OR COMPN OR COMPSN OR COMPSNS)
        221069 PROFIL?
L59       5574 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

TOTAL FOR ALL FILES
L60     130507 (AMINO ACID OR SER OR SERINE)(15A)(COMPOSITION# OR PROFIL?)

=> s l12 and l60
FILE 'MEDLINE'
L61          8 L1 AND L49

FILE 'SCISEARCH'
L62          8 L2 AND L50

FILE 'LIFESCI'
L63          3 L3 AND L51

FILE 'BIOTECHDS'
L64          2 L4 AND L52

FILE 'BIOSIS'
L65         18 L5 AND L53

FILE 'EMBASE'
L66          8 L6 AND L54

FILE 'HCAPLUS'
L67         18 L7 AND L55

FILE 'NTIS'
L68          0 L8 AND L56

FILE 'ESBIOBASE'
L69          3 L9 AND L57

FILE 'BIOTECHNO'
L70          4 L10 AND L58

FILE 'WPIDS'
L71          2 L11 AND L59

TOTAL FOR ALL FILES
L72         74 L12 AND L60

=> s (heterologous or foreign or recombinant)(5a)protein#(10a)(produc? or express?
or optimiz?)
FILE 'MEDLINE'
         53007 HETEROLOGOUS
         65999 FOREIGN
        294716 RECOMBINANT
       2245712 PROTEIN#
       1479209 PRODUC?
```

```
        1189611 EXPRESS?
          86595 OPTIMIZ?
L73        11277 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                 ? OR EXPRESS? OR OPTIMIZ?)


FILE 'SCISEARCH'
          25505 HETEROLOGOUS
          35464 FOREIGN
         175583 RECOMBINANT
        1774394 PROTEIN#
        2135740 PRODUC?
        1526773 EXPRESS?
         296759 OPTIMIZ?
L74        11472 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                 ? OR EXPRESS? OR OPTIMIZ?)


FILE 'LIFESCI'
          16860 HETEROLOGOUS
           9728 FOREIGN
          78715 RECOMBINANT
         683363 PROTEIN#
         600691 PRODUC?
         488130 EXPRESS?
          23816 OPTIMIZ?
L75         8672 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                 ? OR EXPRESS? OR OPTIMIZ?)


FILE 'BIOTECHDS'
          12440 HETEROLOGOUS
           6925 FOREIGN
         110954 RECOMBINANT
         179354 PROTEIN#
         246622 PRODUC?
         166239 EXPRESS?
          21488 OPTIMIZ?
L76        31791 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                 ? OR EXPRESS? OR OPTIMIZ?)


FILE 'BIOSIS'
          35675 HETEROLOGOUS
          35956 FOREIGN
         213769 RECOMBINANT
        2115796 PROTEIN#
        2167262 PRODUC?
        1447830 EXPRESS?
          85361 OPTIMIZ?
L77        13912 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                 ? OR EXPRESS? OR OPTIMIZ?)


FILE 'EMBASE'
          24656 HETEROLOGOUS
          36978 FOREIGN
         196365 RECOMBINANT
        1841094 PROTEIN#
        1393403 PRODUC?
        1092766 EXPRESS?
          82286 OPTIMIZ?
L78         9173 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                 ? OR EXPRESS? OR OPTIMIZ?)


FILE 'HCAPLUS'
          35433 HETEROLOGOUS
```

```
            53583 FOREIGN
           215028 RECOMBINANT
          2507260 PROTEIN#
          4739035 PRODUC?
          1080289 PRODN
          5257422 PRODUC?
                    (PRODUC? OR PRODN)
          1446128 EXPRESS?
           360435 OPTIMIZ?
L79         26253 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                  ? OR EXPRESS? OR OPTIMIZ?)


FILE 'NTIS'
              358 HETEROLOGOUS
           390920 FOREIGN
             1887 RECOMBINANT
            20815 PROTEIN#
           383352 PRODUC?
            42085 EXPRESS?
            62468 OPTIMIZ?
L80           186 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                  ? OR EXPRESS? OR OPTIMIZ?)


FILE 'ESBIOBASE'
            15205 HETEROLOGOUS
            12571 FOREIGN
            98984 RECOMBINANT
           881143 PROTEIN#
           712812 PRODUC?
           696236 EXPRESS?
            42201 OPTIMIZ?
L81          9584 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                  ? OR EXPRESS? OR OPTIMIZ?)


FILE 'BIOTECHNO'
            14199 HETEROLOGOUS
             6070 FOREIGN
           125134 RECOMBINANT
           653195 PROTEIN#
           394590 PRODUC?
           452182 EXPRESS?
            16086 OPTIMIZ?
L82          8130 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                  ? OR EXPRESS? OR OPTIMIZ?)


FILE 'WPIDS'
            11979 HETEROLOGOUS
            52020 FOREIGN
            52731 RECOMBINANT
           195750 PROTEIN#
          2700178 PRODUC?
           159549 EXPRESS?
            61673 OPTIMIZ?
L83          6267 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A)PROTEIN#(10A)(PRODUC
                  ? OR EXPRESS? OR OPTIMIZ?)


TOTAL FOR ALL FILES
L84        136717 (HETEROLOGOUS OR FOREIGN OR RECOMBINANT)(5A) PROTEIN#(10A)(PRODU
                  C? OR EXPRESS? OR OPTIMIZ?)

=> s l12 and 184
FILE 'MEDLINE'
```

```
L85            5 L1 AND L73

FILE 'SCISEARCH'
L86            5 L2 AND L74

FILE 'LIFESCI'
L87            6 L3 AND L75

FILE 'BIOTECHDS'
L88            6 L4 AND L76

FILE 'BIOSIS'
L89            3 L5 AND L77

FILE 'EMBASE'
L90            2 L6 AND L78

FILE 'HCAPLUS'
L91            9 L7 AND L79

FILE 'NTIS'
L92            0 L8 AND L80

FILE 'ESBIOBASE'
L93            4 L9 AND L81

FILE 'BIOTECHNO'
L94            2 L10 AND L82

FILE 'WPIDS'
L95            2 L11 AND L83

TOTAL FOR ALL FILES
L96           44 L12 AND L84

=> s l60 and l84
FILE 'MEDLINE'
L97           56 L49 AND L73

FILE 'SCISEARCH'
L98           55 L50 AND L74

FILE 'LIFESCI'
L99           42 L51 AND L75

FILE 'BIOTECHDS'
L100          568 L52 AND L76

FILE 'BIOSIS'
L101          65 L53 AND L77

FILE 'EMBASE'
L102          70 L54 AND L78

FILE 'HCAPLUS'
L103          196 L55 AND L79

FILE 'NTIS'
L104          0 L56 AND L80

FILE 'ESBIOBASE'
L105          48 L57 AND L81
```

```
FILE 'BIOTECHNO'
L106       74 L58 AND L82

FILE 'WPIDS'
L107       61 L59 AND L83

TOTAL FOR ALL FILES
L108     1235 L60 AND L84

=> s l108 and coli
FILE 'MEDLINE'
     272003 COLI
L109       33 L97 AND COLI

FILE 'SCISEARCH'
     261958 COLI
L110       29 L98 AND COLI

FILE 'LIFESCI'
     111372 COLI
L111       24 L99 AND COLI

FILE 'BIOTECHDS'
      50744 COLI
L112      140 L100 AND COLI

FILE 'BIOSIS'
     328942 COLI
L113       32 L101 AND COLI

FILE 'EMBASE'
     195802 COLI
L114       38 L102 AND COLI

FILE 'HCAPLUS'
     299483 COLI
L115       75 L103 AND COLI

FILE 'NTIS'
       2962 COLI
L116        0 L104 AND COLI

FILE 'ESBIOBASE'
      82752 COLI
L117       20 L105 AND COLI

FILE 'BIOTECHNO'
      94549 COLI
L118       32 L106 AND COLI

FILE 'WPIDS'
      32693 COLI
L119       19 L107 AND COLI

TOTAL FOR ALL FILES
L120      442 L108 AND COLI

=> s (l36 or l48 or l72 or l96 or l120)
FILE 'MEDLINE'
L121       56 (L25 OR L37 OR L61 OR L85 OR L109)
```

```
FILE 'SCISEARCH'
L122        49 (L26 OR L38 OR L62 OR L86 OR L110)


FILE 'LIFESCI'
L123        37 (L27 OR L39 OR L63 OR L87 OR L111)


FILE 'BIOTECHDS'
L124       146 (L28 OR L40 OR L64 OR L88 OR L112)


FILE 'BIOSIS'
L125        60 (L29 OR L41 OR L65 OR L89 OR L113)


FILE 'EMBASE'
L126        50 (L30 OR L42 OR L66 OR L90 OR L114)


FILE 'HCAPLUS'
L127       111 (L31 OR L43 OR L67 OR L91 OR L115)


FILE 'NTIS'
L128         0 (L32 OR L44 OR L68 OR L92 OR L116)


FILE 'ESBIOBASE'
L129        29 (L33 OR L45 OR L69 OR L93 OR L117)


FILE 'BIOTECHNO'
L130        43 (L34 OR L46 OR L70 OR L94 OR L118)


FILE 'WPIDS'
L131        23 (L35 OR L47 OR L71 OR L95 OR L119)


TOTAL FOR ALL FILES
L132       604 (L36 OR L48 OR L72 OR L96 OR L120)

=> s l132 not 2004-2008/py
FILE 'MEDLINE'
     2828837 2004-2008/PY
               (20040000-20089999/PY)
L133        44 L121 NOT 2004-2008/PY


FILE 'SCISEARCH'
     5257377 2004-2008/PY
               (20040000-20089999/PY)
L134        35 L122 NOT 2004-2008/PY


FILE 'LIFESCI'
      610068 2004-2008/PY
L135        26 L123 NOT 2004-2008/PY


FILE 'BIOTECHDS'
      110412 2004-2008/PY
L136        79 L124 NOT 2004-2008/PY


FILE 'BIOSIS'
     2438788 2004-2008/PY
L137        50 L125 NOT 2004-2008/PY


FILE 'EMBASE'
     2465331 2004-2008/PY
L138        33 L126 NOT 2004-2008/PY


FILE 'HCAPLUS'
     5685072 2004-2008/PY
```

```
L139         75 L127 NOT 2004-2008/PY


FILE 'NTIS'
          68767 2004-2008/PY
L140          0 L128 NOT 2004-2008/PY


FILE 'ESBIOBASE'
        1416926 2004-2008/PY
L141         18 L129 NOT 2004-2008/PY


FILE 'BIOTECHNO'
            586 2004-2008/PY
L142         43 L130 NOT 2004-2008/PY


FILE 'WPIDS'
        4801415 2004-2008/PY
L143          4 L131 NOT 2004-2008/PY


TOTAL FOR ALL FILES
L144        407 L132 NOT 2004-2008/PY

=> dup rem l144
PROCESSING COMPLETED FOR L144
L145        201 DUP REM L144 (206 DUPLICATES REMOVED)

=> s leptin
FILE 'MEDLINE'
L146      13799 LEPTIN


FILE 'SCISEARCH'
L147      18045 LEPTIN


FILE 'LIFESCI'
L148       1942 LEPTIN


FILE 'BIOTECHDS'
L149        365 LEPTIN


FILE 'BIOSIS'
L150      16507 LEPTIN


FILE 'EMBASE'
L151      14251 LEPTIN


FILE 'HCAPLUS'
L152      15687 LEPTIN


FILE 'NTIS'
L153         22 LEPTIN


FILE 'ESBIOBASE'
L154       8624 LEPTIN


FILE 'BIOTECHNO'
L155       2512 LEPTIN


FILE 'WPIDS'
L156        977 LEPTIN


TOTAL FOR ALL FILES
L157      92731 LEPTIN
```

```
=> s l157(10a)(ser or serine)
FILE 'MEDLINE'
         24227 SER
        104476 SERINE
L158        12 L146(10A)(SER OR SERINE)

FILE 'SCISEARCH'
         25468 SER
         60386 SERINE
L159        15 L147(10A)(SER OR SERINE)

FILE 'LIFESCI'
         12695 SER
         25076 SERINE
L160         3 L148(10A)(SER OR SERINE)

FILE 'BIOTECHDS'
          5928 SER
          5782 SERINE
L161         5 L149(10A)(SER OR SERINE)

FILE 'BIOSIS'
         26259 SER
         82532 SERINE
L162        12 L150(10A)(SER OR SERINE)

FILE 'EMBASE'
         24058 SER
         67554 SERINE
L163        14 L151(10A)(SER OR SERINE)

FILE 'HCAPLUS'
         38596 SER
        119700 SERINE
L164        17 L152(10A)(SER OR SERINE)

FILE 'NTIS'
           438 SER
           578 SERINE
L165         0 L153(10A)(SER OR SERINE)

FILE 'ESBIOBASE'
         14901 SER
         32396 SERINE
L166        14 L154(10A)(SER OR SERINE)

FILE 'BIOTECHNO'
         11924 SER
         28989 SERINE
L167         4 L155(10A)(SER OR SERINE)

FILE 'WPIDS'
         13584 SER
         11087 SERINE
L168         5 L156(10A)(SER OR SERINE)

TOTAL FOR ALL FILES
L169       101 L157(10A)(SER OR SERINE)

=> s l157 and ((ser or serine)(8a)(rich or level#) or (amino acid)(2a)composition)
FILE 'MEDLINE'
         24227 SER
```

```
        104476 SERINE
         97298 RICH
       1728866 LEVEL#
          3591 (SER OR SERINE)(8A)(RICH OR LEVEL#)
        679698 AMINO
       1545785 ACID
        512917 AMINO ACID
                  (AMINO(W)ACID)
        179800 COMPOSITION
         10381 (AMINO ACID)(2A)COMPOSITION
L170         8 L146 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
               )COMPOSITION)


FILE 'SCISEARCH'
         25468 SER
         60386 SERINE
        182902 RICH
       1857333 LEVEL#
          3200 (SER OR SERINE)(8A)(RICH OR LEVEL#)
        436194 AMINO
       1284495 ACID
        229538 AMINO ACID
                  (AMINO(W)ACID)
        433876 COMPOSITION
          7145 (AMINO ACID)(2A)COMPOSITION
L171         7 L147 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
               )COMPOSITION)


FILE 'LIFESCI'
         12695 SER
         25076 SERINE
         42324 RICH
        519831 LEVEL#
          1902 (SER OR SERINE)(8A)(RICH OR LEVEL#)
        188499 "AMINO"
        346634 "ACID"
        128460 AMINO ACID
                  ("AMINO"(W)"ACID")
        107815 COMPOSITION
          4806 (AMINO ACID)(2A)COMPOSITION
L172         1 L148 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
               )COMPOSITION)


FILE 'BIOTECHDS'
          5928 SER
          5782 SERINE
          5272 RICH
         60173 LEVEL#
           246 (SER OR SERINE)(8A)(RICH OR LEVEL#)
         77138 AMINO
        156885 ACID
         56317 AMINO ACID
                  (AMINO(W)ACID)
         43596 COMPOSITION
           882 (AMINO ACID)(2A)COMPOSITION
L173         3 L149 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
               )COMPOSITION)


FILE 'BIOSIS'
         26259 SER
         82532 SERINE
        134104 RICH
```

```
         1945774 LEVEL#
            3980 (SER OR SERINE)(8A)(RICH OR LEVEL#)
          607898 AMINO
         1529894 ACID
          351102 AMINO ACID
                    (AMINO(W)ACID)
          364911 COMPOSITION
           19281 (AMINO ACID)(2A)COMPOSITION
L174           6 L150 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
                 )COMPOSITION)

FILE 'EMBASE'
           24058 SER
           67554 SERINE
           86612 RICH
         1965291 LEVEL#
            3169 (SER OR SERINE)(8A)(RICH OR LEVEL#)
          477055 "AMINO"
         1561386 "ACID"
          322430 AMINO ACID
                    ("AMINO"(W)"ACID")
          162494 COMPOSITION
           11083 (AMINO ACID)(2A)COMPOSITION
L175          10 L151 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
                 )COMPOSITION)

FILE 'HCAPLUS'
           38596 SER
          119700 SERINE
          315641 RICH
         2553316 LEVEL#
            4948 (SER OR SERINE)(8A)(RICH OR LEVEL#)
         1167276 AMINO
         4574559 ACID
          588346 AMINO ACID
                    (AMINO(W)ACID)
          723003 COMPOSITION
         1531580 COMPN
         1961864 COMPOSITION
                    (COMPOSITION OR COMPN)
           29911 (AMINO ACID)(2A)COMPOSITION
L176          26 L152 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
                 )COMPOSITION)

FILE 'NTIS'
             438 SER
             578 SERINE
            9733 RICH
          238143 LEVEL#
              26 (SER OR SERINE)(8A)(RICH OR LEVEL#)
            7322 AMINO
           45258 ACID
            2654 AMINO ACID
                    (AMINO(W)ACID)
           64397 COMPOSITION
             169 (AMINO ACID)(2A)COMPOSITION
L177           0 L153 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
                 )COMPOSITION)

FILE 'ESBIOBASE'
           14901 SER
           32396 SERINE
```

```
          56532 RICH
         717809 LEVEL#
           2352 (SER OR SERINE)(8A)(RICH OR LEVEL#)
         205248 AMINO
         402935 ACID
         113740 AMINO ACID
                  (AMINO(W)ACID)
          99818 COMPOSITION
           2421 (AMINO ACID)(2A)COMPOSITION
L178          6 L154 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
                )COMPOSITION)

FILE 'BIOTECHNO'
          11924 SER
          28989 SERINE
          29372 RICH
         367944 LEVEL#
           1708 (SER OR SERINE)(8A)(RICH OR LEVEL#)
         204625 AMINO
         349810 ACID
         154660 AMINO ACID
                  (AMINO(W)ACID)
          36875 COMPOSITION
           5058 (AMINO ACID)(2A)COMPOSITION
L179          3 L155 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
                )COMPOSITION)

FILE 'WPIDS'
          13584 SER
          11087 SERINE
          41223 RICH
         706149 LEVEL#
            206 (SER OR SERINE)(8A)(RICH OR LEVEL#)
         299450 AMINO
        1143063 ACID
          87042 AMINO ACID
                  (AMINO(W)ACID)
         820929 COMPOSITION
           8849 COMPN
         398425 COMPSN
         979566 COMPOSITION
                  (COMPOSITION OR COMPN OR COMPSN)
           1210 (AMINO ACID)(2A)COMPOSITION
L180          3 L156 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
                )COMPOSITION)

TOTAL FOR ALL FILES
L181         73 L157 AND ((SER OR SERINE)(8A)(RICH OR LEVEL#) OR (AMINO ACID)(2A
                ) COMPOSITION)

=> s (l169 or l181) not 2004-2008/py
FILE 'MEDLINE'
        2828837 2004-2008/PY
                  (20040000-20089999/PY)
L182          6 (L158 OR L170) NOT 2004-2008/PY

FILE 'SCISEARCH'
        5257377 2004-2008/PY
                  (20040000-20089999/PY)
L183          9 (L159 OR L171) NOT 2004-2008/PY

FILE 'LIFESCI'
```

```
        610068 2004-2008/PY
L184         2 (L160 OR L172) NOT 2004-2008/PY


FILE 'BIOTECHDS'
        110412 2004-2008/PY
L185         1 (L161 OR L173) NOT 2004-2008/PY


FILE 'BIOSIS'
       2438788 2004-2008/PY
L186         6 (L162 OR L174) NOT 2004-2008/PY


FILE 'EMBASE'
       2465331 2004-2008/PY
L187        10 (L163 OR L175) NOT 2004-2008/PY


FILE 'HCAPLUS'
       5685072 2004-2008/PY
L188         8 (L164 OR L176) NOT 2004-2008/PY


FILE 'NTIS'
        68767 2004-2008/PY
L189         0 (L165 OR L177) NOT 2004-2008/PY


FILE 'ESBIOBASE'
       1416926 2004-2008/PY
L190         7 (L166 OR L178) NOT 2004-2008/PY


FILE 'BIOTECHNO'
          586 2004-2008/PY
L191         6 (L167 OR L179) NOT 2004-2008/PY


FILE 'WPIDS'
       4801415 2004-2008/PY
L192         0 (L168 OR L180) NOT 2004-2008/PY


TOTAL FOR ALL FILES
L193        55 (L169 OR L181) NOT 2004-2008/PY

=> dup rem l193
PROCESSING COMPLETED FOR L193
L194        14 DUP REM L193 (41 DUPLICATES REMOVED)

=> d tot

L194 ANSWER 1 OF 14    MEDLINE on STN                 DUPLICATE 1
TI   Engineering Escherichia coli for increased productivity of serine
     -rich proteins based on proteome profiling.
SO   Applied and environmental microbiology, (2003 Oct) Vol. 69, No. 10, pp.
     5772-81.
     Journal code: 7605801. ISSN: 0099-2240.
AU   Han Mee-Jung; Jeong Ki Jun; Yoo Jong-Shin; Lee Sang Yup
AN   2003497591     MEDLINE

L194 ANSWER 2 OF 14    MEDLINE on STN                 DUPLICATE 2
TI   Insulin resistance and lipodystrophy in mice lacking ribosomal S6 kinase
     2.
SO   Diabetes, (2003 Jun) Vol. 52, No. 6, pp. 1340-6.
     Journal code: 0372763. ISSN: 0012-1797.
AU   El-Haschimi Karim; Dufresne Scott D; Hirshman Michael F; Flier Jeffrey S;
     Goodyear Laurie J; Bjorbaek Christian
AN   2003292836     MEDLINE
```

L194 ANSWER 3 OF 14 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on
     STN   DUPLICATE 3
TI   Cooperation between insulin and leptin in the modulation of vascular tone
SO   HYPERTENSION, (AUG 2003) Vol. 42, No. 2, pp. 166-170.
     ISSN: 0194-911X.
AU   Vecchione C; Aretini A; Maffei A; Marino G; Selvetella G; Poulet R;
     Trimarco V; Frati G; Lembo G (Reprint)
AN   2003:672025 SCISEARCH

L194 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI   Acute and chronic leptin treatment mediate contrasting effects on
     signaling, glucose uptake, and GLUT4 translocation in L6-GLUT4myc myotubes
SO   Journal of Cellular Physiology (2003), 197(1), 122-130
     CODEN: JCLLAX; ISSN: 0021-9541
AU   Tajmir, Panteha; Kwan, Jamie Jun-Mae; Kessas, Mona; Mozammel, Shehzin;
     Sweeney, Gary
AN   2003:713728 HCAPLUS
DN   140:1133

L194 ANSWER 5 OF 14 BIOSIS COPYRIGHT (c) 2008 The Thomson Corporation on STN
TI   LEPTIN ENHANCES PDGF-DEPENDENT CELL GROWTH IN HEPATIC STELLATE CELLS:
     INVOLVEMENT OF THE PI3K-AKT PATHWAY. .
SO   Digestive Disease Week Abstracts and Itinerary Planner, (2003) Vol. 2003,
     pp. Abstract No. 254. e-file.
     Meeting Info.: Digestive Disease 2003. FL, Orlando, USA. May 17-22, 2003.
     American Association for the Study of Liver Diseases; American
     Gastroenterological Association; American Society for Gastrointestinal
     Endoscopy; Society for Surgery of the Alimentary Tract.
AU   Ikejima, Kenichi [Reprint Author]; Lang, Tie [Reprint Author]; Yoshikawa,
     Mutsuko [Reprint Author]; Hirose, Miyoko [Reprint Author]; Kitamura,
     Tsuneo [Reprint Author]; Takei, Yoshiyuki [Reprint Author]; Sato, Nobuhiro
     [Reprint Author]
AN   2004:26045 BIOSIS

L194 ANSWER 6 OF 14 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on
     STN   DUPLICATE 4
TI   Biphasic regulation of extracellular-signal-regulated protein kinase by
     leptin in macrophages: role in regulating STAT3 Ser(727)
     phosphorylation and DNA binding
SO   BIOCHEMICAL JOURNAL, (15 JUN 2002) Vol. 364, Part 3, pp. 875-879.
     ISSN: 0264-6021.
AU   O'Rourke L; Shepherd P R (Reprint)
AN   2002:544834 SCISEARCH

L194 ANSWER 7 OF 14 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights
     reserved on STN
TI   Ghrelin, an orexigenic signaling molecule from the gastrointestinal tract.
SO   Current Opinion in Pharmacology, (1 Dec 2002) Vol. 2, No. 6, pp. 665-668.
     Refs: 50
     ISSN: 1471-4892 CODEN: COPUBK
AU   Kojima, Masayasu (correspondence)
CS   Molecular Genetics, Institute of Life Science, Kurume University, Kurume,
     Fukuoka 839-0861, Japan. mkojima@lsi.kurume-u.ac.jp
AU   Kangawa, Kenji
CS   Department of Biochemistry, National Cardiovascular Center, Research
     Institute, Fujishirodai, Suita, Osaka 565-8565, Japan.
AN   2002460419 EMBASE

L194 ANSWER 8 OF 14   MEDLINE on STN   DUPLICATE 5
TI   Leptin effect on endothelial nitric oxide is mediated through
     Akt-endothelial nitric oxide synthase phosphorylation pathway.
SO   Diabetes, (2002 Jan) Vol. 51, No. 1, pp. 168-73.

Journal code: 0372763. ISSN: 0012-1797.
AU   Vecchione Carmine; Maffei Angelo; Colella Salvatore; Aretini Alessandra;
      Poulet Roberta; Frati Giacomo; Gentile Maria Teresa; Fratta Luigi;
      Trimarco Valentina; Trimarco Bruno; Lembo Giuseppe
AN   2002045139   MEDLINE

L194 ANSWER 9 OF 14 EMBASE COPYRIGHT (c) 2008 Elsevier B.V. All rights
     reserved on STN   DUPLICATE 6
TI   Evaluation of methods for determination of a reconstructed history of gene
      sequence evolution.
SO   Molecular Biology and Evolution, (2001) Vol. 18, No. 11, pp. 2040-2047.
      Refs: 31
      ISSN: 0737-4038 CODEN: MBEVEO
AU   Liberles, D.A. (correspondence)
CS   Department of Biochemistry, Stockholm Bioinformatics Center, Stockholm
      University, 106 91 Stockholm, Sweden. liberles@sbc.su.se
AN   2001387705 EMBASE

L194 ANSWER 10 OF 14 SCISEARCH COPYRIGHT (c) 2008 The Thomson Corporation on
     STN
TI   Serum values of proinflammatory cytokines are inversely correlated with
      serum leptin levels in patients with advanced stage cancer at
      different sites
SO   JOURNAL OF MOLECULAR MEDICINE-JMM, (JUL 2001) Vol. 79, No. 7, pp. 406-414.
      ISSN: 0946-2716.
AU   Mantovani G (Reprint); Maccio A; Madeddu C; Mura L; Massa E; Mudu M C;
      Mulas C; Lusso M R; Gramignano G; Piras M B
AN   2001:626038 SCISEARCH

L194 ANSWER 11 OF 14   MEDLINE on STN   DUPLICATE 7
TI   Selective interaction between leptin and insulin signaling pathways in a
      hepatic cell line.
SO   Proceedings of the National Academy of Sciences of the United States of
      America, (2000 Feb 29) Vol. 97, No. 5, pp. 2355-60.
      Journal code: 7505876. ISSN: 0027-8424.
AU   Szanto I; Kahn C R
AN   2000160956   MEDLINE

L194 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI   Lipoapoptosis in beta-cells of obese prediabetic fa/fa rats. Role of
      serine palmitoyltransferase overexpression
SO   Journal of Biological Chemistry (1998), 273(49), 32487-32490
      CODEN: JBCHA3; ISSN: 0021-9258
AU   Shimabukuro, Michio; Higa, Moritake; Zhou, Yan-Ting; Wang, May-Yun;
      Newgard, Christopher B.; Unger, Roger H.
AN   1998:797445 HCAPLUS
DN   130:151958

L194 ANSWER 13 OF 14   MEDLINE on STN   DUPLICATE 8
TI   Ligand-independent dimerization of the extracellular domain of the
      leptin receptor and determination of the stoichiometry of
      leptin binding.
SO   The Journal of biological chemistry, (1997 Jul 18) Vol. 272, No. 29, pp.
      18304-10.
      Journal code: 2985121R. ISSN: 0021-9258.
AU   Devos R; Guisez Y; Van der Heyden J; White D W; Kalai M; Fountoulakis M;
      Plaetinck G
AN   97364760   MEDLINE

L194 ANSWER 14 OF 14   MEDLINE on STN   DUPLICATE 9
TI   A constitutively active version of the Ser/Thr kinase Akt
      induces production of the ob gene product, leptin, in 3T3-L1

adipocytes.

=> d ab 12

L194 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
AB   We reported that the lipoapoptosis of beta-cells observed in fat-laden islets
     of obese fa/fa Zucker Diabetic Fatty (ZDF) rats results from overprodn. of
     ceramide, an initiator of the apoptotic cascade and is induced by
     long-chain fatty acids (FA). Whereas the ceramide of cytokine-induced
     apoptosis may be derived from sphingomyelin hydrolysis, FA-induced
     ceramide overprodn. seems to be derived from FA. We therefore
     semiquantified mRNA of serine palmitoyltransferase (SPT), which catalyzes
     the first step in ceramide synthesis. It was 2-3-fold higher in fa/fa
     islets than in +/+ controls. [3H]Ceramide formation from [3H]serine was
     2.2-4.5-fold higher in fa/fa islets. Triacsin-C, which blocks
     palmitoyl-CoA synthesis, and L-cycloserine, which blocks SPT activity,
     completely blocked [3H]ceramide formation from [3H]serine. Islets of
     fa/fa rats are unresponsive to the lipopenic action of leptin, which
     normally depletes fat and prevents FA up-regulation of SPT. To determine the
     role of leptin unresponsiveness in the SPT overexpression, we transferred
     wild type OB-Rb cDNA to their islets; now leptin completely blocked the
     exaggerated FA-induced increase of SPT mRNA while reducing the fat
     content. Beta-cell lipoapoptosis was partially prevented in vivo by
     treating prediabetic ZDF rats with L-cycloserine for 2 wk. Ceramide
     content and DNA fragmentation both declined 40-50%. We conclude that
     lipoapoptosis of ZDF rats is mediated by enhanced ceramide synthesis from
     FA and that blockade by SPT inhibitors prevents lipoapoptosis.